

## CLAIMS

What is claimed is:

1    1.    A system for identifying a presence of a creature disposed in water comprising:  
2                a transducer for receiving at least one vibrational wave and generating at least  
3                one transformed signal responsive to said vibrational wave; and  
4                a signal processor for processing said transformed signal to indicate a presence  
5                of a particular type of creature which is disposed in water.

1    2.    The system of claim 1, wherein said system is included with at least one object  
2                selected from the group consisting of a buoy, a mooring, an underwater structure and a  
3                watercraft.

1    3.    The system of claim 1, further comprising an indicator which communicates at  
2                least one warning signal responsive to a detection of said creature.

1    4.    The system of claim 3, wherein said indicator is selected from the group  
2                consisting of a visual indicator, an audio transducer, and a mechanical vibration device.

1    5.    The system of claim 3, wherein said indicator is a mechanical device operatively  
2                connected to a control system of a watercraft.

1    6.    The system of claim 1, wherein said signal processor comprises at least one  
2                counter, said counter measuring a number of creature detection occurrences.

1    7.    The system of claim 1, wherein said signal processor comprises at least one  
2    counter, said counter measuring a number of false creature identification occurrences.

1    8.    The system of claim 1, further comprising a snap rejection module, said snap  
2    rejection module rejecting vibrational waves having a duration less than a  
3    predetermined value.

1    9.    The system of claim 1, wherein said vibrational wave comprises a sound created  
2    by at least one of a vocalization, a translational movement in water, a slapping of water,  
3    and a clicking.

1    10.   The system of claim 1, wherein said signal processor detects a harmonic  
2    frequency content of said signal.

1    11.   The system of claim 10, wherein said signal processor measures an amplitude of  
2    at least one harmonic frequency.

1    12.   The system of claim 10, wherein said signal processor detects a maximum  
2    harmonic frequency.

1    13.   A watercraft comprising:

2           a system for identifying a presence of a creature disposed in water, said system  
3   comprising:  
4           a transducer for receiving at least one vibrational wave and generating at  
5           least one transformed signal responsive to said vibrational wave; and  
6           a signal processor for processing said transformed signal to indicate a  
7           presence of a particular type of creature which is disposed in water.

1   14.   A buoy comprising:  
2           a system for identifying a presence of a creature disposed in water, said system  
3   comprising:  
4           a transducer for receiving at least one vibrational wave and generating at  
5           least one transformed signal responsive to said vibrational wave; and  
6           a signal processor for processing said transformed signal to indicate a  
7           presence of a particular type of creature which is disposed in water.

1   15.   A method for identifying a presence of a creature disposed in water comprising  
2   the steps of:  
3           receiving at least one vibrational wave and generating at least one transformed  
4           signal responsive to said vibrational wave; and  
5           processing said transformed signal to indicate a presence of a particular type of  
6           creature which is disposed in water.

1    16.    The method according to claim 15, further comprising the step of communicating  
2    at least one warning signal responsive to a detection of the creature.

1    17.    The method according to claim 16, wherein said step of communicating at least  
2    one warning signal comprises at least one step selected from the group consisting of  
3    providing a visual indicator, providing an audio signal, and providing a vibrational signal.

1    18.    The method according to claim 15, further comprising the step of automatically  
2    controlling at least one operational parameter of a watercraft responsive to a detection  
3    of the creature.

1    19.    The method according to claim 15, further comprising the step of measuring a  
2    number of creature detection occurrences.

1    20.    The method according to claim 15, further comprising the step of measuring a  
2    number of false creature identification occurrences.

1    21.    The method according to claim 15, wherein said processing step further  
2    comprises the step of rejecting signals associated with vibrational waves having a  
3    duration less than a predetermined value.

1    22.    The method according to claim 15, wherein said receiving at least one vibrational  
2    wave step comprises receiving a sound created by at least one of a vocalization, a  
3    translational movement in water, a slapping of water, and a clicking.

1    23.    The method according to claim 15, wherein said processing step further  
2    comprises the step of detecting a harmonic frequency content of the signal.

1    24.    The method according to claim 15, wherein said processing step further  
2    comprises the step of measuring an amplitude of at least one harmonic frequency.

1    25.    The method according to claim 15, wherein said processing step further  
2    comprises the step of detecting a maximum harmonic frequency.